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NOTICE OF ALLOWANCE AND FEE(S) DUE

28289 7590 05/01/2008

THE WEBB LAW FIRM, P.C.
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PITTSBURGH, PA 15219

EXAMINER

HU, HENRY S

ART UNIT

PAPER NUMBER

1796

DATE MAILED: 05/01/2008

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/550,479

09/23/2005

Jun Kanega

1217-052603

1967

TITLE OF INVENTION: PROCESS FOR PRODUCING FLUOROCOPOLYMER

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	\$1440	\$300	\$0	\$1740	08/01/2008

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

HOW TO REPLY TO THIS NOTICE:

I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

A. If the status is the same, pay the TOTAL FEE(S) DUE shown above.

B. If the status above is to be removed, check box 5b on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above, or

If the SMALL ENTITY is shown as NO:

A. Pay TOTAL FEE(S) DUE shown above, or

B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check box 5a on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and 1/2 the ISSUE FEE shown above.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

PART B - FEE(S) TRANSMITTAL

**Complete and send this form, together with applicable fee(s), to: Mail Mail Stop ISSUE FEE
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Alexandria, Virginia 22313-1450
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INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

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I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

(Depositor's name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/550,479	09/23/2005	Jun Kanega	1217-052603	1967

TITLE OF INVENTION: PROCESS FOR PRODUCING FLUOROCOPOLYMER

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	\$1440	\$300	\$0	\$1740	08/01/2008

EXAMINER	ART UNIT	CLASS-SUBCLASS
HU, HENRY S	1796	525-326200

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

- ☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.
- ☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list

- (1) the names of up to 3 registered patent attorneys or agents OR, alternatively, 1 _____
- (2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed. 2 _____
- 3 _____

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE (B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent) : ☐ Individual ☐ Corporation or other private group entity ☐ Government

4a. The following fee(s) are submitted:

- ☐ Issue Fee
- ☐ Publication Fee (No small entity discount permitted)
- ☐ Advance Order - # of Copies _____

4b. Payment of Fee(s); (Please first reapply any previously paid issue fee shown above)

- ☐ A check is enclosed.
- ☐ Payment by credit card. Form PTO-2038 is attached.
- ☐ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment, to Deposit Account Number _____ (enclose an extra copy of this form).

5. Change in Entity Status (from status indicated above)

- ☐ a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27. ☐ b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2).

NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

Authorized Signature _____

Date _____

Typed or printed name _____

Registration No. _____

This collection of information is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

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EXAMINER

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ART UNIT

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Determination of Patent Term Adjustment under 35 U.S.C. 154 (b) (application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 232 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 232 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (<http://pair.uspto.gov>).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

Notice of Allowability

Application No.

10/550,479

Applicant(s)

KANEKA ET AL.

Examiner

Art Unit

HENRY S. HU

1796

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Amendment of March 26, 2008.
2. ☒ The allowed claim(s) is/are 1, 4, 13, 15 and 17-21.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some* c) ☐ None of the:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
- * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).**
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|--|--|
| 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____. |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____ | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____. |

1. This application is in condition for allowance except for the presence of **Group II (Claims 5-7 and 12-16)**, which are **non-elected without traverse** as filed on September 4, 2007. Accordingly, Claims 5-7 and 12-16 have been cancelled. An action follows.

EXAMINER'S AMENDMENT

2. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

The examiner has cancelled the above-mentioned **Claims 5-7 and 12-16**, which are **non-elected without traverse** by Attorney **Kent E. Baldauf** (registration # 25,826, tel: 412 471-8815) on September 4, 2007.

Claims 5-7 and 12-16 are cancelled.

DETAILED ACTION

3. This Office Action is in response to **Amendment** filed on March 26, 2008. **Claim 1** was amended; **Claims 5-7 and 12-16** were cancelled, while new **Claims 17-21** were added.

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To be specific, **parent Claim 1** was amended to add all the limitations of dependent Claims **2 and 3**. No new matter is found.

The use of above Examiner's amendment is to cancel **non-elected Group II (Claims 5-7 and 12-16)**, which are **non-elected without traverse** as filed on September 4, 2007, while **other non-elected Claims 10-11 are cancelled by Applicants.** Claims **1, 4 and 17-21** with only **one** independent claim (Claim 1) are now pending. An action follows.

4. Claim rejections under **Non-Final** Office Action filed on November 27, 2007 are now removed for the reasons given in paragraphs 5-13 thereafter.

Allowable Subject Matter

5. Claims 1, 4 and 17-21 are allowed.

6. The following is an examiner's statement of reasons for allowance: The above Claims 1, 4 and 17-21 are allowed over the closest references:

7. *The limitation of parent **Claim 1** in present invention relates to **a process for preparing a fluorine containing copolymer** by an **emulsion polymerization** method in the presence of a **pH modifier** wherein the pH modifier is **aqueous ammonia** and*

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wherein a coagulating agent comprising a cationic surfactant and a water soluble organic solvent is used in the preparation of the fluorine containing copolymer by coagulating a fluorine containing copolymer in a fluorine containing copolymer dispersed aqueous solution prepared by the emulsion polymerization method, the said cationic surfactant is $(R_4N^+)X^-$ with the factors four R's and X as specified.

*See other limitations of dependent **Claims 4 and 17-21.***

8. Applicants have now claimed in once-amended parent **Claim 1** an unexpected way of obtaining a fluorine containing copolymer by an emulsion polymerization method in the presence of a pH modifier such as aqueous ammonia. The key point is that **a specific coagulating agent is further used. It comprises a cationic surfactant and a water soluble organic solvent.** Furthermore, said **cationic surfactant is $(R_4N^+)X^-$** with all the factors including **four R's and one X** are as specified. For instance, R is any one of an alkyl group of 1 to 22 carbon atoms, a fluoroalkyl group and a hydrogen atom, four R's may be the same or different, provided that four R's are not hydrogen atoms simultaneously, and X is a halogen atom.

9. Primary reference **Tanaka** is silent about using a specific coagulating agent such as a mixture of “a cationic surfactant” and “a water-soluble organic solvent”. However, as exactly pointed out by Applicants on pages **8-9** of Remarks, a combination of two secondary references including **Bekiarian and Kitahara** still cannot teach such a subject matter.

The key point is that **the cationic surfactant used by Kitahara is cationic type but actually relates to a quite different chemical structure.** To be specific, the R groups are either hydroxyl functionalized or containing aromatic ring structure. Accordingly, the coagulating agent containing **a mixture of (A) a cationic surfactant** represented by the above formula $(R_4N^+)X$ wherein R is an alkyl group, a fluoroalkyl group or a hydrogen atom **and (B) a water soluble organic solvent** is not taught by Tanaka, Bekiarian or Kitahara.

10. It is noted by this Examiner that **different chemical structure will result at least somewhat different reactivity and/or property.** Additionally, cationic surfactant related to instant invention does not have any hydroxyl-functional group or aromatic ring structure. Different degree of interaction will certainly form from references' cationic surfactant. Even a small difference in the structure, the resultant cationic compound will behave at least somewhat differently. Therefore, the above-mentioned references, in combination or alone, does not teach or fairly suggest the limitations of present invention.

Note: **Tanaka** reference is from international search report of Applicants' priority document **WO 2004/085492 A1** to Kanega et al.

11. After further examination and search, the examiner found the following prior art did not teach the claimed limitation: **US 6,720,360 B1 to Grootaert** et al. only discloses the

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preparation of various ultra-clean fluoropolymers by coagulating the polymer essentially without adding ions (abstract, line 1-4; title). Water-soluble organic solvent such as alkanol may be used to coagulate (column 14, line 61-64), while NH_3 -generating agent may be added in the curing of nitrile-containing fluoropolymer (column 8, line 6-31). Additionally, the aqueous ammonia is not present in polymerization at all. Further more, **aqueous ammonia is not related to the structure of newly amended cationic surfactant**. Therefore, Grootaert fails to teach or fairly suggest the process limitation of present invention.

12. In the course of “using a mixture made from a cationic surfactant and a water-soluble organic solvent” for pH modification purpose in the fluoropolymer polymerization, references in combination or alone cannot teach or suggest the exact chemical structure on **cationic surfactant ($\text{R}_4\text{N}^+\text{X}^-$)** with all the factors including **four R’s and one X** are as specified. Therefore, the present invention is novel.

13. As of the date of this office action, the examiner has not located or identified any reference that can be used singularly or in combination with another reference including the above references to render the present invention anticipated or obvious to one of the ordinary skill in the art. Therefore, the independent and parent process **Claim 1** is allowed for the reason listed above. Since the prior art of record fails to teach the present invention, the remaining pending dependent **Claims 4 and 17-21** are passed to issue.

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14. Any inquiry concerning this communication or earlier communication from the examiner should be directed to **Dr. Henry S. Hu whose telephone number is (571) 272-1103**. The examiner can be reached on Monday through Friday from 9:00 AM –5:00 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dr. Vasu Jagannathan, can be reached on (571) 272-1119. The **fax** number for the organization where this application or proceeding is assigned is **(571) 273-8300** for all regular communications. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

//Peter D. Mulcahy//
Primary Examiner, Art Unit 1796

/H. S. H./
Examiner, Art Unit 1796

April 27, 2008